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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,178	03/19/2004	Shiro Yamagishi	61282-067	6750

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MCDERMOTT WILL & EMERY LLP
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WASHINGTON, DC 20005-3096

EXAMINER

SCHNEIDER, JOSHUA D

ART UNIT	PAPER NUMBER
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2182

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/804,178

Applicant(s)

YAMAGISHI, SHIRO

Examiner

Joshua D. Schneider

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/1/2007 have been fully considered but they are not persuasive. With regards to claim 1, Applicant argues that the length register disclosed by Baxter does not store a value representing the difference between the start and the end address. Rather, the length register stores the number of pieces of data to transfer (see column 1, lines 52 - 55). However, this argument does not address the claim. It may be true that Applicant intended a difference sort of value to be stored in the third register, but Applicant also used broad language in this limitation that allows anything that corresponds to the difference between the start and end address to be in the third register. Such a teaching is certainly found in the applied art of the given rejection.
2. With regards to claim 5, Applicant again argues that the difference is not represented. This is not true. The value is represented, though the method of representation is not necessarily the same. The method of representing the difference between the start and the end is not limited by the claims. Therefore, the different methods of counting between the start and the end are of no consequence. Again with reference to Coke, Applicant argues that the difference is not in the third register. The method of counting here again is different, but such limitation is not found in the claim. Analogously, a person could choose to count the difference between two points in base 10 or base 2, and the number stored would be dramatically different, but the numbers would still represent the same thing, and that is all that is required by the claim. For this reason, the arguments are not persuasive.

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3. It is noted that the 101 rejection has been overcome by the amendment.

Claim Objections

4. Claim 5 is objected to because of the following informalities: the term DMA is misspelled DMS. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Application Publication 2002/0026543 to Tojima et al. in further view of U.S. Patent 6,370,601 to Baxter.

7. With regards to claim 1, Tojima teaches a first register, which sets the start address of a ring buffer (register inherent to storage in memory, paragraph 252-254), a second register which sets the number of DMA transfers from the start address to the end address of the ring buffer (register inherent to storage in memory, paragraph 254-256), but does not clearly teach a third register which sets the difference between the end address and the start address of the ring buffer. Baxter teaches that difference between the end address and the start address was well known to be included in the information to perform a DMA transfer (length, register inherent to storage in memory, column 3, lines 43-55). It would have been obvious to one of ordinary skill in the art to

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combine the length information of Baxter with the DMA controller of Tojima in order to reduce the processor load on the system.

8. With regards to claim 2, Tojima teaches a second rectangular mode (paragraph 252) wherein the second register is used as a register for setting the number of DMA transfers in a contiguous area (paragraph 253) including rectangular areas in the DMA transfer of a rectangular area included in an area (paragraph 252-254).

9. Claims 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0026543 to Tojima et al. in further view of U.S. Patent 6,370,601 to Baxter and U.S. Patent 5,708,849 to Coke et al.

10. With regards to claim 3, Tojima fails to teach the address increment of a non-contiguous area. Coke teaches the third register is used as a register for setting the address increment of a non-contiguous area in the DMA transfer of a rectangular area included in an area (incrementer, Fig. 3, element 39, column 5, lines 65-69). It would have been obvious to one of ordinary skill in the art to combine the amount of information to be transferred of Coke with the DMA controller of Tojima in order to reduce the processor load on the system.

11. With regards to claim 4, Tojima fails to teach, but Coke teaches a fourth register, which retains a current transfer address (Fig. 3, element 35), a counter which counts the number of DMA transfers set to the second register (Fig. 3, element 36), and an adder, which sums the value of the third register and the value of the fourth register when the counter has completed counting the number of DMA transfers set to the second register (Fig. 3, element 39). It would have been obvious to one of ordinary skill in the art to combine the length information of Baxter

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and increment information of Coke with the DMA controller of Tojima in order to reduce the processor load on the system.

12. With regards to claim 5, Tojima teaches in the case of ring buffer transfer, the program causes a computer to work as means for setting the start address of a ring buffer to a first register (paragraph 252-254), means for setting the number of DMA transfers from the start address to the end address of the ring buffer to a second register (paragraph 254-256), but does not clearly teach a third register which sets the difference between the end address and the start address of the ring buffer. Baxter teaches that difference between the end address and the start address was well known to be included in the information to perform a DMA transfer (length, column 3, lines 43-55). Tojima teaches in the case of rectangular block transfer said program causes the computer to work as means for setting the start address at the start of transfer to said first register (paragraph 252-254), means for setting the number of DMA transfers in a contiguous area including rectangular areas to a second register (paragraph 254-256), but does not clearly teach means for setting the address increment of a non-contiguous area to the third register. Coke teaches that setting the address increment of a non-contiguous area to the third register (Figs. 3 and 6, column 5, line 48, though column 8, line 47). It would have been obvious to one of ordinary skill in the art to combine the length information of Baxter and increment information of Coke with the DMA controller of Tojima in order to reduce the processor load on the system.
13. With regards to claim 6, Tojima teaches a first mode of operation corresponds to a ring buffer transfer, and said second mode of operation corresponds to a rectangular block transfer (paragraph 42).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Schneider whose telephone number is (571) 272-4158. The examiner can normally be reached on M, T, Th, and F, 9-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDS



KIM HUYNH
SUPERVISORY PATENT EXAMINER
4/20/07